References:

1. Ahmed Tanveer, Singh Arvind Kumar, Jaiswal Nupur, Singh Deepika. Synthesis and Pharmacological activity of 1,3,4-ThiadiazolenDerivatives: A Review. International research journal of Pharmacy, 2012; 3(3): 70-82.

2. Pattan Shashikant R, Kekare Prajact, Dighe Nachiket S, Nirmal Sunil A, Musmade Deepak S, Parjane Smita K and Daithankar Aarti V. Synthesis and biological evaluation of some 1,3,4-thiadiazoles. Journal of Chemical and Pharmaceutical Research, 2009; 1(1): 191-198.

3. Pattan Shashikant R, Kekare Prajact, Pranesha, H.Raveendra L and C.K Hariprasad. Synthesis and evaluation of some substituted Thiadiazoles as antidiabetic agents. Indian Journal of Heterocyclic chemistry, 2009; 18(1): 317-318.

4. Dogan Hatice N, Duran Arzu, Rollas Sevim, Sener Goksel, Uysal Meral K and Gulen Dumrul. Synthesis of new 2,5-disubstituted-1,3,4 thiadiazoles and preliminary evaluation of anticonvulsant and antimicrobial activities. Bioorganic and Medicinal Chemistry, 2002; 10(1): 2893-2898.

5. Llango Kalippan and Valentina Parthiban. Facile synthesis and cytotoxic activity of 3,6 disubstituted 1,2,4-triazolo-[3,4-b]-1,3,4-thiadiazoles. European Journal of Chemistry, 2010; 1(1): 50-53.

6. Vasoya S.L, Paghdar D.J, Chovatia P.T and Joshi H. S. Synthesis of some New

Thiosemicarbazide and 1,3,4-Thiadiazole Heterocycles bearing Benzo[b]Thiophene nucleus as a potent antitubercular and antimicrobial agents. Journal of Sciences, Islamic Republic of Iran, 2005; 16(1): 33-36

7. Jain Sanmati K and Mishra P. Preparation and evaluation of some 1,3,4-thiadiazoles as diuretic agents. Indian Journal of chemistry, 2004; 43(B): 184-188.

8. Chavan Ameya A and Pai Nandini R. Synthesis and antihyperglycemic activity of 2,4-Thiazolidinediones. Indian Journal of Heterocyclic chemistry, 2007; 17(7): 45-48.

9. Salunkhe Nilesh G.. Green synthesis, characterization and biological evaluation of some triazole and thiadiazole. Journal of current and Pharmaceutical sciences, 2012; 2(2): 100-106.

10. Narwade S.K., Halnor V.B, Dalvi NR, Gill C H and Karale BK. Conventional and ultrasound mediated synthesis of some thiadiazoles, triazoles and oxadiazoles. Indian Journal of chemistry, 2006; 45(B): 2776-2780.

11. Pandey Alok, Dewangan Dhansay, Verma Shekhar, Mishra Achal, Dubey Ravindra Dhar. Synthesis of Schiff bases of 2- amino-5- aryl-1 3,4- thiadiazole and its analgesis, anti-inflammatory, anti-bacterial and anti tubercular activity. International Journal of Chem. tech Research, 2011; 3(1): 178-184.

12. Shashikant RP, Desai NS, Khade AB, Rasal VP & Paschapur MS. Synthesis of some new thiadiazole derivatives and their antidiabetic activity. Indian Journal of Heterocyclic Chemistry, 2008; 17: 283.

13. Pattan S R, Kekare Prajact, Dighe NS,BhawarSB, Nikalje Ana, Patil Ashwini and Hole MB. Synthetic and evaluation of some New Thiazolidinedione derivatives for their Antidiabetic activities. Asian Journal of Research chemistry, 2009; 2(2): 123-126.

14. Rathee Anju & Late Jag Mohan. Condensed bridgehead nitrogen heterocyclic system. Facile synthesis and antimicrobial activitiy of imidazo [2,1-b]-1,3,4-thiadiazoles. Indian Journal of Heterocyclic Chemistry, 2007; 17: 101.

15. Shashikant RPattan, Desai NS, Rabara RA, Bukitgar AA & Wakale VS. Synthesis and antimicrobial evaluation of some 1,3,4-thiadiazole derivative. Indian Journal of Pharmaceutical Education and Research, 2008; 42(4): 314.

16. Tai Baowei Man-Lin Li, &You-Mingzhang. Synthesis and bioactivity study of 2,5-bismercapto-1,3,4-thiadiazole heterocyclic derivatives. Indian Journal of Chemistry, 2007; 46(B): 544.

17. Rajive G, Poonam K, Avinash KG, P Somal & S Singh. Microwave assisted synthesis and biological activity of 3alkyl/aryl6-9hloro-2-4-dihydronaphth-2yl)-5,6-dihydro-s-triazolo[3,4-d][1,3,4]thiadiazoles. Indian Journal of Chemistry, 2007; 46(B): 980.

18. Manojkumar P, Joydeep Muzumdar, Rakesh Chawla, S. Bhuvana, Sonia George, S. Gopala Krishna & T.K. Ravi. Microwave assisted synthesis of 3,6-disubstituted-5,6dihydro-s-triazole(3,4-b)(1,3,4)thiadiazoles and their biological activity. Indian Journal of Heterocyclic Chemistry, 2008; 17: 263.

19. Janardhan Nayak, KS Girisha, N Schetha Shetty & Balakrishna K. Synthesis of some1,3,4-thiadiazoles carrying quinolone moiety as possible bioactive agents. Indian Journal of Heterocyclic Chemistry, 2008; 17: 209.

20. Pattan S R., kekare P., Dighe N.S., Kothiwale V.A., Shete R.V., Musmade D.S and Parjane S.K. Synthesis and evaluation of some Benzene Sulfonamide derivatives for antimicrobial, antidiabetic and anti-inflammatory activities. Indian Drugs, 2010; 43(3): 14-

21. Narsingh Sachan, Shivajirao S. Kadam & Vithal M. Kulkarni. Synthesis, antihyperglycemic activity, and QSAR of 5-benzylidene-2,4-thiazolidinedione. Indian Journal of Heterocyclic Chemistry, 2007; 17: 57.

22. Shashikant R.Pattan, Amol Khade, PD Pawar, ADTaranalli, BS Kittur. Synthesis of 2 amino [5'-(4-sulphonyl benzylidene)-2,4-thiazolidinedione 6-fluoro benzothiazoles as antiinflamatory agents. Indian Journal of Heterocyclic Chemistry, 2007; 16: 299.

23. Pattan S.R, Reddy VVK, Pawar PD, Khade AB, Desai NS, Bhat AR & Taranalli AD. Synthesized and antiinflammatory evaluation of (4-phenylamino) Benzylidene (thiazolidine 2,4 dione) derivative. Indian Drugs, 2007; 44: 253.

24. Ying Jun Li, Li Jun Liu, Kun Jin, Yong Ting Xu, Su Qin Sun. Synthesis and bioactivity of a novel series of 3,6-disubstituted1,2,4triazolo[3,4-b]-1,3,4-thiadiazoles. Chinese Chemical Letters, 2010; (21) : 293–296

25. Parmar Kokila, Prajapati Sarju, Patel Rinku, Patel Rekha. Synthesis of new and biologically active[1,2,4] triazolo[3,4-b][1,3,4]thiadiazole-2-aryl thiazolidinone-4-ones by reaction of Schiff bases with mercapto acetic acid in presence of THF with adding anhydrous $ZnCl_2$ .Research Journal of Chemical Sciences, 2011; 1(1) :18-24.

26. Nadeem Siddiquia, Priya Ahujaa, Waquar Ahsana, S. N. Pandeyab, M Shamsher Alama**.** Thiadiazoles: Progress Report on Biological Activities. Journal of Chemical and Pharmaceutical Research, 2009; 1(1): 19-30.

27. John Paul Kilburn, Jesper Lau and Raymond C. F. Jones. Solid-phase synthesis of substituted 1,3,4-thiadiazoles. Tetrahedron Letters, 2003; 44: 7825–7828.

28. V. Mathew, J. Keshavayya, V.P. Vaidya. Heterocyclic system containing bridge head nitrogen atom: synthesis and pharmacological activities of some substituted 1,2,4-triazolo[3,4-b]-1,3,4-thiadiazoles. European Journal of Medicinal Chemistry, 2006; 41: 1048-1058.

29. Sabir Hussain, Jyoti Sharma and Mohd. Amir. Synthesis and Antimicrobial Activities of 1,2,4-Triazole and 1,3,4-Thiadiazole Derivatives of 5-Amino-2-Hydroxybenzoic Acid. E-Journal of Chemistry, 2008; 5(4): 963-968.

30. Vivek Polshettiwar, Rajender S. Varma. Greener and rapid access to bio-active heterocycles: one-pot solvent-free synthesis of 1,3,4-oxadiazoles and 1,3,4-thiadiazoles. Tetrahedron Letters, 2008; 49: 879–883.
31. Fezzeh Aryanasab, Azim Ziyaei Halimehjani, Mohammad R. Saidi. Dithiocarbamate as an efficient intermediate for the synthesis of 2-amino-1,3,4-thiadiazoles in water. Tetrahedron Letters, 2010; 51: 790–792.
32. Ying Jun Li, Li Jun Liu, Kun Jin, Yong Ting Xu, Su Qin Sun. Synthesis and bioactivity of a novel series of 3,6-disubstituted 1,2,4-triazolo[3,4-b]-1,3,4-thiadiazoles.Chinese Chemical Letters, 2010; 21: 293–296.
33. Xi Cun Wang, Xiao Mei Ding, Sheng Qing Wang, Xue Fei Chen, Zheng Jun Quan. Synthesis of 2-(N-formyl)-5-aryl/aryloxymethyl-1,3,4-thiadiazoles with potential bioactivity in PEG-400. Chinese Chemical Letters, 2010; 21: 301–304.
34. Rune Severinsen, John Paul Kilburn and Jesper F. Lau. Versatile strategies for the solid phase synthesis of small heterocyclic scaffolds:[1,3,4]-thiadiazoles and [1,3,4]-oxadiazoles. Tetrahedron, 2005; 61: 5565–5575.
35. Mazaahir kidwai and Shweta Rastogi. Green synthesis of substituted imidazothiadiazoles using ionic liquid. Indian Journal of Chemistry,2006; 45(B): 2321-2324.
36. Hatice N. Dogan, Arzu Duran, Sevim Rollas, Go ksel Sener, Meral K. Uysal and Dumrul Gu len. Synthesis of New 2,5-Disubstituted-1,3,4-thiadiazoles and Preliminary Evaluation of Anticonvulsant and Antimicrobial Activities. Bioorganic & Medicinal Chemistry, 2002; 10: 2893–2898.
37. Mazaahir Kidwai. Green Chemistry environmentally Benign Approaches, March 2012: ISBN 978-953-51-03349.pp 82-83.
38. Arvind Kumar Singh, Shoban Bose, Umesh Pratap Singh, S.janal R.Shukla, V.Singh, M.Lohani. Synthesis and biological activity of some new thiadiazole derivative. The Pharma Research (T. Pharm. Res.), 2009; 2: 133-137.
39. Karigar Asif A, M Himaja Ramana M.V, Sikarwar Mukesh. One–pot Synthesis and anti-microbial activity of 2-amino-5-aryl-5H-thiazolo [4,3-b]-1,3,4-thiadiazoles. International Journal of Research in Ayurveda and pharmacy, 2011; 2(1): 170-174.
40. Karigar Asif A, M. Himaja, Mali Sunil.V, K. Jagadeesh Prathap and Sikarwar Mukesh S. One–pot Synthesis and antitubercular activity of 2-amino-5-aryl-5H-thiazolo [4,3-b]-1,3,4-thiadiazoles. International Research Journal of Pharmacy, 2011; 2(1): 153-158.
41. Malipeddi Himaja, Karigar Asif A, Malipeddi Venkata Ramana and Sikarwar Mukesh

S. Synthesis and antitubercular activity of some novel thiazolidinone derivatives. Tropical Journal of Pharmaceutical research, 2012; 13(4): 611-620.

Signature of the Guide **Signature of the Candidate**

Name of the guide: Dr. RAJESH A. SHASTRI **PRAJACT G. KEKARE**
Designation: Asst. Professor
Dept. of Pharmacognosy and Phytochemistry **Registration No.15712191**
Institute: Soniya Education Trust's College of Pharmacy.